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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/174,002 10/16/98 BOCH

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EXAMINER

WM02/0410

Miles & Stockbridge, P.C.  
Suite 500  
1751 Pinnacle Drive  
McLean VA 22101-3833

NGUYEN, P

ART UNIT

PAPER NUMBER

2663

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.

09/174,002

Applicant(s)

BOCH ET AL.

Examiner

Phuongchau Ba Nguyen

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2001.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 26-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 26-37 and 39-43 is/are rejected.
- 7) ☐ Claim(s) 38,44 is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: \_\_\_\_\_

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 26, 34 and 42 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The new matter added to claims 26, 34 and 42 is "DIRECT" at lines 3 & 7 (claim 26), 3 & 6 (claim 34), and 4 & 8 (claim 42).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim[s] 26-28, 30, 34-35, 39, 42-43 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilbert et al [6,016,311].

Gilbert discloses in figure 4 that the wireless communication system 100 comprises a plurality of cells 102. Each cell 102 contains an associated cell site 104

which primarily includes a base station 106 and an active antenna array 108 [a first and second of one or more interface radio cards as claimed]. Each cell 102 within the wireless communication system 100 provides wireless connectivity between the cell's base station 106 and a plurality of customer premises equipment (CPE) 110 located at fixed customer sites 112 [NIUs as claimed] throughout the coverage area of the cell 102. The radio communication within a cell 102 is preferably bi-directional in nature. {col.9, 57-col.10, 34}

Gilbert also discloses that one of the base stations is controlled by a network management 122 [network manager as claimed].{col.10,52-56}

In addition, Gilbert further discloses that in cellular communication systems, geographic areas or regions are typically divided into cells that are theoretically hexagonally shaped. The size of a cell is typically defined by the transmitting coverage of a base station which is usually centered within the cell it serves. For example, the average cell radius of the cells shown in FIG. 4 is typically between 2.5 and three kilometers.{col.9, 43-49}

Gilbert does not explicitly disclose an interface system for providing a point to point inter-cell radio link for communicating with a base station in a neighboring cell.

Gilbert further discloses in figure 4 that the two base stations 106 are connected by a wired cable.

To implement the radio inter-cell link to the wired/fiber-optical/coaxial cable would have been highly desirable and obvious to one with ordinary skill in the art. The

motivation/suggestion for doing so is to reduce the highly cost of setting up a connecting cables between a two or more base stations.

Although Gilbert does not explicitly disclose the multi-services switch at each of base stations, but since the base station comprises an array antenna (which is a plurality of antennas), thus, the switch is inherent in the array antenna to control the active of the array antenna at each of base stations.

5. Claim[s] 31 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilbert et al [6,016,311] as applied to claims 30, 35 above, and further in view of Smith et al [5,432,780].

Gilbert does not disclose that each of said first one or more interface cards and each of said second one or more interface cards communicates with said sectorized antenna via one or more combiners.

Smith discloses a five channel combiners 282, representative of the combiner 455 or 475 of figures 4A & 4B, connected to antenna sector X {see fig. 4C}.

To implement the combiner in Smith system to Gilbert's base station would have been obvious to one with ordinary skill in the art. The motivation/suggestion for doing so is to carry out diversity combining for the signals and reduce the disadvantages caused by a fading signal .

6. Claim[s] 29 & 36-37 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilbert et al [6,016,311] as applied to claims 30, 35 above, and further in view of Pasternak et al [5,936,949].

Gilbert does not disclose that the cellular wireless network is connected to an asynchronous transfer mode network (ATM).

Pasternak further discloses that a base station 205 is connected to the service provider's backbone network (i.e., ATM network) {see col.5, 58-60 and figure 2}.

To include the feature of connecting the cellular wireless network to ATM network would have been obvious to one with ordinary skill in the art. The motivation/suggestion for doing so is to provide an efficient point-to-multipoint microwave ATM network including a base station broadcasting a continuous transmission with a sector antenna {see abstract, lines 1-4}.

7. Claim[s] 32, 40 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilbert et al [6,016,311] as applied to claims 30, 35 above, and further in view of Jaisingh et al [6,009,096].

Gilbert does not disclose that radio inter-cell link is in a ring configuration.

Jaisingh discloses a sonet ring 208 [ring configuration as claimed] in figure 2A for joining together a plurality of access nodes 204-1, 204-2...204-5 {see figure 2A}

To implement the sonet ring 208 in Jaisingh system to Gilbert system would have been obvious to one with ordinary skill in the art. The motivation/suggestion for doing so is to help isolate the broken ring/connection between nodes by re-creating a new

connection, thus give the ring network great flexibility, reliability, and ease of configuration and maintenance.

8. Claim[s] 33, 41 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilbert et al [6,016,311] as applied to claims 30, 35 above, and further in view of Acompora [6,049,593].

Gilbert does not disclose that radio inter-cell link is in a mesh configuration.

Acompora discloses a mesh network 100 in figure 2.

To implement the mesh network in Acompora system to Gilbert system would have been obvious to one with ordinary skill in the art. The motivation/suggestion for doing so is to provide efficient alternative transmission link of high quality incase the primary path between two sites (base stations) were congested or in a state of failure.

#### ***Allowable Subject Matter***

9. Claims 38 and 44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

10. Applicant's arguments filed 1-24-2001 have been fully considered but they are not persuasive.

A/. Applicants argued in paragraph 1 of page 3 of the remarks that "the second and third paragraph of page 5 of the present application clearly describe such radio interface and the components 106 and 108 of Gilbert are NOT radio interface cards.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the description of radio interface cards in page 5 at the second and third paragraph of the original disclosure) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

B/. Applicants further argued in paragraph 4 of page 3 of the remarks that "the communication link 116 is a non-radio frequency" which is in contrast to the radio-link as defined in the claims.

In reply, applicant is directed to paragraphs 2-5 in page 3 of the previous rejection that "to implement the radio (wireless) inter-cell link to the wired/fiber-optical/coaxial cable (wired link) would have been obvious to a skilled artisan because for doing so would reduce the highly cost of setting up a connecting cables between a two or more base stations. [Orthopedic Equipment Co. v. All Orthopedic Appliances, 217 USPQ 2181 (Fed. Cir. 1983); Indiana General Corp. v. Krystinel Corp., 164 USPQ 321 (2d Cir. 1970); Del Mar Laboratory v. United States, 186 USPQ 42 (Trail Div. Ct. Cl. 1975); See also, Environmental Designs, Ltd., v. Union Oil Co. of Calif., 218 USPQ 865 (CAFC 1983); Jacobson Bros., Inc. v. U.S., 185 USPQ 168 (Ct. Cl. 1978).



C/. Applicants also argued in the bridging paragraph of pages 3-4 that "at page 5, lines 17-20, the radio interfaces cards are installed in an ATM multi-services switch at the base station.

In response, ATM multi-services switch at the base station does not have any function to be distinguish from the switch as disclosed as inherent feature in the array antenna to control the activity of the array antenna at each of the base station in Gilbert's system.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuongchau Ba Nguyen whose telephone number is (703) 305-0093.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen, can be reached on (703) 308-5340. The fax number for this group is (703)305-9509.

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 305-4700.

  
P. NGUYEN

April 9, 2001

  
MELVIN MARCELO  
PRIMARY EXAMINER